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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/830,383      | 04/25/2001  | Martin Weston        | 87805-9021          | 7197             |

7590

05/03/2004

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| EXAMINER |
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PHILIPPE, GIMS S

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| ART UNIT | PAPER NUMBER |
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2613

DATE MAILED: 05/03/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/830,383

**Applicant(s)**

WESTON, MARTIN

**Examiner**

Gims S Philippe

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 17-28 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-28 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 7, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 3-5, 8-13 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4, 6</u> . | 6) <input type="checkbox"/> Other: ____.  |

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## **DETAILED ACTION**

This is a first action in response to application no. 09/830,383 filed on April 25<sup>th</sup> 2001 in which claims 1-13 and 17-28 are presented for examination.

### ***Specification***

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.

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- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### **ABSTRACT**

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 5-7, and 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Boie (US Patent no. 5,444,493).

Regarding claim 1, Boie discloses a method of analysis motion between adjacent fields of interlaced video signal, comprising the steps of vertically interpolating one of both of the fields to produce respective signals for the two fields which corresponds to vertical position (See Boie col. 1, lines 47-66, col. lines 33-43), subtracting the signals to provide a field difference signal (See Boie col. 2, lines 10-20), and removing a component in the field difference which arises from vertical detail (See Boie col. 4, lines 23-31). The applicant should note that the gradient will generate the difference signal.

Regarding claim 6, Boie discloses a method of creating a field difference signal by subtracting video signals from different fields (See Boie col. 2, lines 9-20, col. 6, lines 10-17) characterized in that one or both of the fields are vertically interpolated prior to subtraction by taking weighted sums of lines from within the same field so as to obtain signals corresponding to similar vertical positions (See Boie col. 1, lines 47-66, col. 3, lines 23-42). The applicant should note that the gradient will generate the difference signal.

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As per claim 17, all of the limitations of this claim have been noted in the above rejection of claim 1. In addition, filtering is required to perform

As per claim 18, Boie further provides the field difference for the current and succeeding fields (See Boie col. 1, lines 50-56).

As per claim 7, Boie discloses correcting by taking measure of the vertical detail from one or both of the fields (See Boie col. 4, lines 23-30).

As per claim 2, most of the limitations of this claim have been noted in the above rejection of claim 1. In addition, Boie discloses correcting by taking measure of the vertical detail from one or both of the fields (See Boie col. 4, lines 23-30).

As per claim 5, Boie further provides the field difference for the current and succeeding fields (See Boie col. 1, lines 50-56).

5. Claims 3-5, 8-13, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 20-28 are allowed.

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The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach or suggest a video filtering process creating an output by taking the weighted sum of contributions over a filter aperture... and utilizing each field difference to select a filter aperture. The prior art further fails to teach or suggest comparing a preceding field difference signal with a succeeding field difference signal and changing a selection to film mode if the field difference signal are significantly different, and changing the selection to video mode if both signals are similar but not small.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sezan et al. (US Patent no. 5473383) teaches mechanism for controllably deinterlacing sequential lines of video data field based upon pixel signal associated with three successive interlaced video fields.

Woodham (US Patent no. 5608464) teaches digital video effect generator.

Thomas (US Patent no. 6233018) teaches video signal processing.

Wang et al. (US Patent no. 6266092) teaches method and apparatus for video line multiplication with enhanced sharpness.


Weston (US Patent no. 4789896) teaches interpolating lines of video signals.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gims S Philippe whose telephone number is (703) 305-1107. The examiner can normally be reached on M-F (9:30-7:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S Kelley can be reached on (703) 305-4780. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Gims S Philippe  
Primary Examiner  
Art Unit 2613

GSP

April 29, 2004